ON Semiconductor PYTHON-1300-C Camera Module

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The camera module features ON Semiconductor's PYTHON-1300 color image sensor. The PYTHON-1300 is a 1/2 inch Super-eXtended Graphics Array (SXGA) CMOS image sensor with a pixel array of 1280 by 1024 pixels. Designed to address the needs of general purpose industrial image sensing applications, the new global shutter image sensor combines flexibility in configuration and resolution with high speed and high sensitivity for the industrial imaging market. The ON Semiconductor PYTHON-1300-C Camera Module is compatible with the MicroZed Embedded Vision Carrier Card, and the Smart Vision Development Kit.
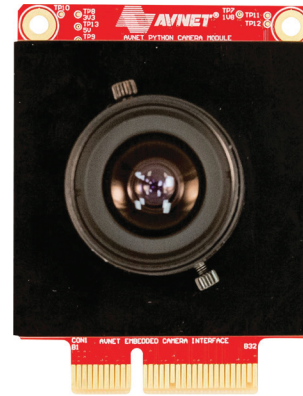
FEATURES

- PYTHON-1300 color image sensor
    - SXGA Resolution: 1280 (H) x 1024 (V) format
    - 210 frames per second (fps) at full resolution
    - 4.8 μm x 4.8 μm pixel size
    - 1/2 inch optical format
    - Pipelined and triggered global shutter
    - Random programmable Region of Interest (ROI) readout
    - On-chip Fixed Pattern Noise (FPN) Correction
    - Automatic Exposure Control (AEC)
    - High Dynamic Range (HDR)

TARGET APPLICATIONS

- Machine Vision
- Motion Monitoring
- Security
- Barcode Scanning (2D)

To purchase this kit, visit avnet.com/us/cam-on-python1300c
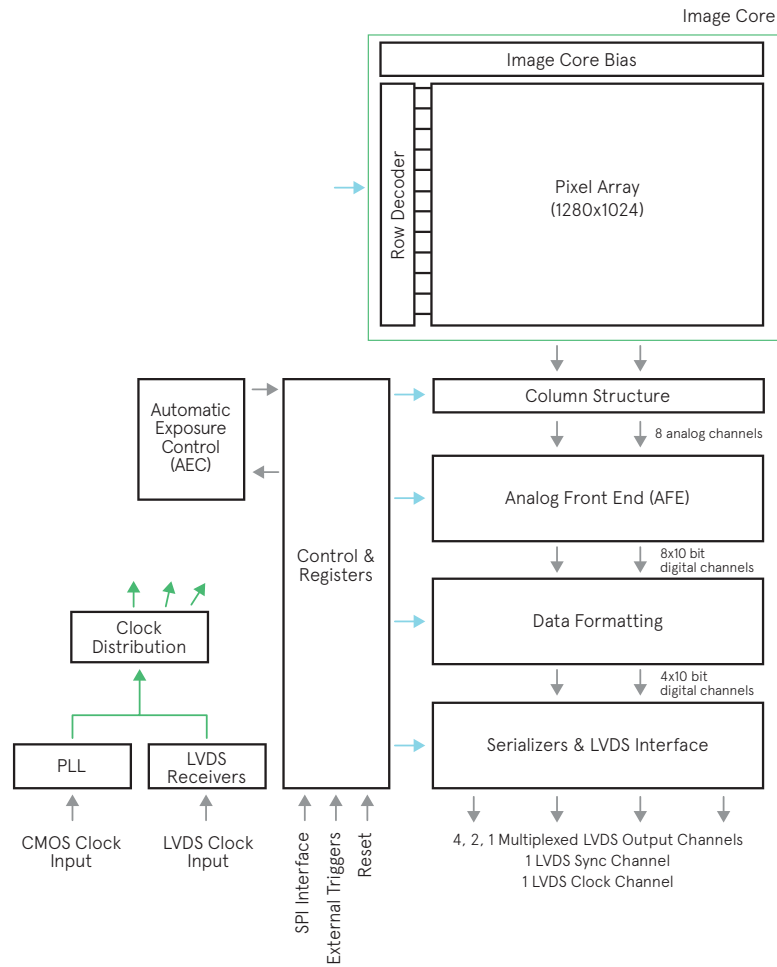
COMPATIBLE WITH

/MICROZED™

KIT INCLUDES

- Welcome Letter
- Quick Start Card
- Hardware
    - PYTHON-1300 Color Image Sensor module
    - Lens holder
    - Lens (C-mount, 2/3" optical size, 8 mm)
    - IR cut filter
- Downloadable documentation and reference designs

BLOCK DIAGRAM

Image Core

Image Core Bias

Row Decoder

Pixel Array
(1280x1024)

Column Structure

8 analog channels

Analog Front End (AFE)

8x10 bit
digital channels

Data Formatting

4x10 bit
digital channels

Serializers & LVDS Interface

Automatic
Exposure
Control
(AEC)

Control &
Registers

Clock
Distribution

PLL

LVDS
Receivers

CMOS Clock
Input

LVDS Clock
Input

SPI Interface

External Triggers

Reset

4, 2, 1 Multiplexed LVDS Output Channels
1 LVDS Sync Channel
1 LVDS Clock Channel

FEATURED MANUFACTURERS

ON Semiconductor® ON

PARTS

Part Number	Description	Resale
AES-CAM-ON-P1300C-G	ON Semiconductor PYTHON-1300-COLOR Camera	$499 USD

RELATED PARTS

Part Number	Description	Resale
AES-MBCC-EMBV-G	MicroZed Embedded Vision Carrier Card Kit	$279 USD
AES-MBCC-EMBV-DEV-KIT	MicroZed Embedded Vision Development Kit	$549 USD

CONTACT INFORMATION

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